We claim:

1. A method suitable for deciding how to classify a sample in one of a number of predetermined classes, the method comprising:

(a) associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k;

(b) calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}; and

(c) designating the sample j as belonging to the class k which has an associated weighted summation of likelihoods CL_{jk} which is greatest in value.

2. The method as claimed in claim 1, wherein the weight w_{ij} is derived from a metric of relative confidence L_{ij}, metric of relative which is calculated as an L-statistic, or linear combination of an order statistic, which represents the statistical separation among an order statistic of the classes k for a particular classifier i.

3. The method as claimed in claim 2, wherein the L-statistic L_{ij} is of the log-likelihoods of respective classes k for classifiers i.

4. The method as claimed in claim 2, wherein the L-statistic L_{ij}, for a particular sample j, is calculated as: $L_{ij} = a_1 l_{ij1} + a_2 l_{ij2} + \ldots + a_n l_{ijn}$, where l_{ijk}s form order statistic, that is $l_{ij1} > l_{ij2} > \ldots > l_{ijn}$ and $a_1 = 1$, $a_2 = -1$ and all other a_is $= 0$.

5. The method as claimed in claim 2, wherein the weight w_i derived from the metric of relative confidence is calculated as a function of (a) sample confidence L_{ij}, equal to

the L-statistic L_{ij} and (b) overall confidence H_i, the cumulative mean of the sample confidence L_{ij} over a plurality of samples j.

6. The method as claimed in claim 5, wherein the overall confidence H_i is successively updated with the sample confidence L_{ij} of each sample j.

7. A computer program product having a computer readable medium having a computer program recorded therein for deciding how to classify a sample in one of a number of predetermined classes, said computer program product comprising:

(a) code means for associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k;

(b) code means for calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}; and

(c) code means designating the sample j as belonging to the class k which has an associated weighted summation of likelihoods CL_{jk} which is greatest in value.

8. An apparatus for classifying a data sample in one of a number of predetermined classes, the apparatus comprising: input means to receive data; and processor means for calculating associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k, and for designating calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}.

9. The apparatus as claimed in claim 8, wherein the weight w_{ij} is derived from a metric of relative confidence L_{ik} metric of relative which is calculated as an L-static, or linear combination of an order statistic, which represents the statistical separation among an order statistic of the classes k for a particular classifier i.

10. The apparatus as claimed in claim 9, wherein the L-statistic L_{ij} is of the log-likelihoods of respective classes k for classifiers i.

11. The apparatus as claimed in claim 9, wherein the L-statistic L_{ij}, for a particular j, is calculated as: $L_{ij} = a_1 l_{ij1} + a_2 l_{ij2} + \ldots + a_n l_{ijn}$, where l_{ijk}s form order statistic, that is $l_{ij1} > l_{ij2} > \ldots > l_{ijn}$ and $a_1 = 1$, $a_2 = -1$ and all other a_is = 0.

12. The apparatus as claimed in claim 9, wherein the weight w_i derived from the metric of relative confidence is calculated as a function of (a) sample confidence L_{ij}, equal to the L-statistic L_{ij} and (b) overall confidence H_i, the cumulative mean of the sample confidence L_{ij} over a plurality of samples j.

13. The apparatus as claimed in claim 12, wherein, the overall confidence H_i is successively updated with the sample confidence L_{ij} of each sample j.